

Application No.: 09/421,971
Filing Date: October 20, 1999
Response to Office Action (mailed December 24, 2003) faxed May 24, 2004
Page 2 of 12

Attorney Docket No.: SALK2350
(088802-5351)

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously presented) A chimeric protein comprising:
a fusion of at least two functional protein units, wherein each functional protein unit comprises the dimerization domain of a member of the steroid/thyroid hormone nuclear receptor superfamily;
wherein said at least two functional protein units are covalently fused into a single polypeptide molecule by (i) fusion of said protein units, or (ii) use of a linker interposed between said protein units; and
wherein said chimeric protein is capable of at least one function selected from the group consisting of DNA binding, ligand binding, transactivation and dimerization.
2. (Previously presented) The chimeric protein according to claim 1 wherein said chimeric protein forms an endodimer.
3. (Original) The chimeric protein according to claim 1 wherein each protein unit comprises a ligand binding domain, an optional hinge domain, and an optional DNA binding domain.
4. (Previously presented) The chimeric protein according to claim 3 wherein said chimeric protein forms an endodimer.
5. (Previously presented) The chimeric protein according to claim 1 wherein at least one dimerization domain is non-mammalian.

Application No.: 09/421,971

Attorney Docket No.: SALK2350

Filing Date: October 20, 1999

(088802-5351)

Response to Office Action (mailed December 24, 2003) faxed May 24, 2004

Page 3 of 12

6. (Previously presented) The chimeric protein according to claim 5 wherein the at least one dimerization domain is from an insect species.

7. (Original) The chimeric protein according to claim 1 wherein at least one functional protein unit comprises the dimerization domain of an ecdysone receptor.

8. (Previously presented) The chimeric protein according to claim 7 wherein the dimerization domain of an ecdysone receptor comprises the dimerization domain of a *Drosophila* ecdysone receptor.

9. (Previously presented) The chimeric protein according to claim 7 wherein the dimerization domain of an ecdysone receptor comprises the dimerization domain of a Lepidoptera ecdysone receptor.

10. (Previously presented) The chimeric protein according to claim 7 wherein the dimerization domain of an ecdysone receptor comprises the dimerization domain of a *Bombyx* ecdysone receptor.

11. (Original) The chimeric protein according to claim 5 wherein at least one functional protein unit comprises the dimerization domain of the *ultraspiracle* protein.

12. (Cancelled).

13. (Original) The chimeric protein according to claim 1 wherein at least one functional protein unit comprises the dimerization domain of the retinoid X receptor.

Application No.: 09/421,971 Attorney Docket No.: SALK2350
Filing Date: October 20, 1999 (088802-5351)
Response to Office Action (mailed December 24, 2003) faxed May 24, 2004
Page 4 of 12

14. (Original) The chimeric protein according to claim 1 wherein the protein units are independently selected from the group consisting of glucocorticoid receptors, mineralocorticoid receptors, estrogen receptors, progesterone receptors, androgen receptors, Vitamin D3 receptors, retinoic acid receptors, retinoid X receptors, peroxisome proliferator-activated receptors, thyroid hormone receptors, and steroid and xenobiotic receptors, farnesoid X receptor, pregnenolone X receptor, liver X receptor, and BXR.

15. (Original) The chimeric protein according to claim 1 wherein the linker contains from about 5 to about 245 amino acids.

16. (Original) The chimeric protein according to claim 15 wherein the linker contains from about 53 to about 125 amino acids.

17. (Previously presented) The chimeric protein according to claim 15 wherein the linker comprises one or more amino acid residues selected from the group consisting of glycine, proline, serine, alanine and threonine.

18. (Previously presented) The chimeric protein according to claim 15 wherein the linker comprises the amino acid sequence of SEQ ID NO:15.

19. (Original) The chimeric protein according to claim 3 wherein one or more protein units further comprise a C-terminal domain.

20. (Original) The chimeric protein according to claim 3 wherein the DNA binding domains of one or more protein units comprise 66 to 68 amino acids, including 9 cysteines.

21. (Original) The chimeric protein according to claim 3 wherein the hinge domain of one or more protein units is the *Bombyx* hinge domain.

DLMR253742.1

Application No.: 09/421,971

Attorney Docket No.: SALK2350

Filing Date: October 20, 1999

(088802-5351)

Response to Office Action (mailed December 24, 2003) faxed May 24, 2004

Page 5 of 12

22. (Original) The chimeric protein according to claim 1 wherein one or more protein units further comprise an activation domain.

23.-60. (Cancelled).

DLMR253742.1